

ABSTRACT

A safety belt without tightly binding body includes a safety belt, a belt retractor, a flashboard, a buckle and a limiter. The limiter includes a housing having a belt inlet and outlet located at side faces thereof. An upper roller and a lower roller are provided within the housing. The lower roller is movably engaged with two lower roller supports disposed in the lower housing. A clamping sleeve is fixedly secured around the lower roller. Electromagnets are mounted to the lower roller supports, respectively. A ratchet wheel and a ratchet pawl are mounted to the lower roller. A clamping sleeve is fixedly secured around the upper roller. The upper roller is movably engaged with two upper roller supports. Springs are provided on the two upper roller supports, respectively. A ratchet wheel and a ratchet pawl are mounted to the upper roller. Electromagnets may be mounted to the bottom of the upper roller supports, respectively. A motor may be mounted within the lower housing for rotating the lower roller. The lower housing also provides an automatic or a manual limiter.